

Work Order ID 141654

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141654

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Item ID: D6102-010 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle Billet
Start Date: 2/5/2016 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 2/19/2016 Req'd Qty: 6.00 ***6*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: MAT045	0.00							DAS
130									14
Packaging	Memo	0.00							9-39
Packaging	LOCATION: MAT045								26/03/01
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							MCS MAR 01 2016
Quality Control									MCS MAR 01 2016

Picklist Print

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Work Order ID: 141654

141654

Parent Item: D6102-010

D6102-010

Parent Item Name: Saddle Billet

Start Date: 2/5/2016

Required Date: 2/19/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP A04.08.19New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6102-010P		Purchased		No			Each	0.0000		6			
D6102-010P													
6061-T6 8.25X7.95X2.5													

**

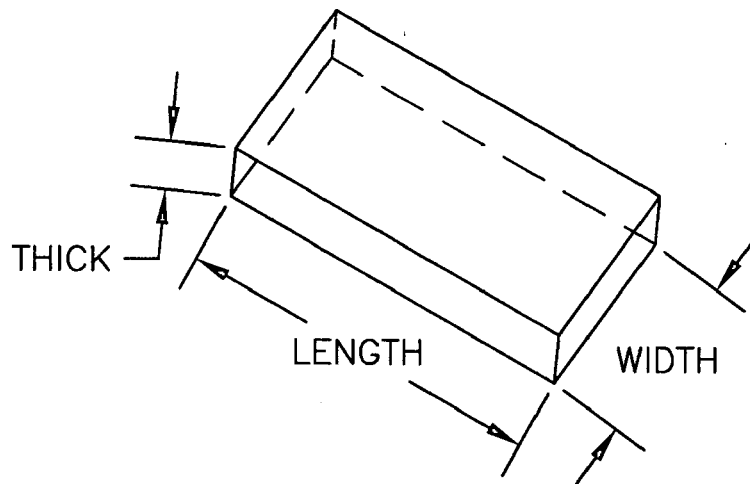
FEB 26 2016

DAS
6
8:39



DESIGN #	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

SPECIFICATION CONTROL DRAWING



RELEASED

06.08.15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

20160209

SH 141654.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

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**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:2896285

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 25-FEB-16	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 2896285-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No 4246992	Line No 1	Item No 14670-MO	Description 2.5000.PL.6061.T651.ALUMINUM.48.5000.144.5000 CUT RECTANGLE TO 8.25 IN (+ .0310/- .0000 IN (HT # 156742B9, ONLY)) X 7.95 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.95")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/11				
Purchase Order No 31324		Part Number YOUR ITEM NUMBER: D6102-010		Ordered Qty 6.00 PCS		Invoice Qty 6.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S SHIP TO CASTLE, TORONTO (MISSISSAUGA) CUSTOMS BROKER: GEORGE H. YOUNG END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No. 120343216	Mill KAISER ALUMINUM	Heat Number 	Mech Id	PCS 6	Width (IN)	Length (IN)	Shipped Qty(LBS) 98.7282

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.
Date Printed: 25-FEB-2016 06:28:03 PM



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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:



FEB 25 2015

SHIP TO:

A M CASTLE & CO
14001 ORANGE AVE
P.O. BOX 1402
PARAMOUNT, CA 90723

**KAISER
ALUMINUM**

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

CERTIFIED TEST REPORT

Serial Number

4398877

CUSTOMER PO NUMBER: 340191		WORK PACKAGE:		CUSTOMER PART NUMBER: 14670		SHIP RUN/LOAD: 103400/12		GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: 1197089		LINE ITEM: 2	SHIP DATE: 28-NOV-2015	ALLOY: 6061	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect Precision Plate			
WEIGHT SHIPPED: 5236 LB		QUANTITY: 3 PCS EST.		TRUCK B/L #: 2057255		GAUGE: 2.5000 IN (63.5000 MM)		DIAMETER/WIDTH: 48.500 IN (1231.9 MM)		LENGTH: 144.500 IN (3670.3 MM)

MHU 1943890: LOT 147067B3: 2 pieces;

MHU 1944842: LOT 156742B9: 1 pieces;

DAS

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16/03/01

Certified Specifications

AMS 4027/RevN
EN 10204-3.1/Rev2004

ASME SB 209/Rev2010

ASTM B 209/Rev14

Test Code: 1511

Test Results

Lot: 147067B3

Cast 384

Drop 10

Ingot 1



Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	48.4 : 49.5 (334 : 341)	43.8 : 44.8 (302 : 309)	13.7 : 13.7

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.75	0.6	0.31	0.07	1.0	0.21	0.14	0.03	0.01	0.00	TOT 0.06

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4398877

Lot: 156742B9 Cast 384 Drop 72 Ingot 2 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	<u>T651</u>	LT / 2 (Min:Max)	47.3 : 48.2 (326 : 332)	42.7 : 43.1 (294 : 297)	14.2 : 14.3

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.69	0.6	0.30	0.08	1.0	0.19	0.13	0.02	0.01	0.00	TOT 0.06

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
<u>6061</u>												
MIN(wt%)	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

6061 sheet or plate certified to AMS 4025, AMS 4026, or AMS
4027 also meets applicable requirements of cancelled
specification AMS-QQ-A-250/11, Rev. A.

DAS

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CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser), is ISO-9001:2008/AS9100C certified and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements.
- * was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.226 for domestic content.

- * has been thermally processed in compliance with AMS 2772, where applicable.

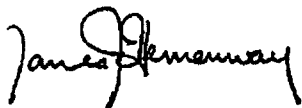
- * is mercury free, within the limits of detection of ASTM E1251 (< 1 ppm).

- * is in compliance with RoHS 2, European Union Directive 2011/65/EU.

- * is in compliance with and regularly monitors any updates to the European Chemical Agency, ECHA, REACH regulations, (EC) n°1907/2006.

- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.



JAMES HEMENWAY, LABORATORIES SUPERVISOR



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Castle Metals®

A.M. Castle & Co.

INTRA-COMPANY TRANSFER PROFORMA INVOICE

Vendor (Name and Address) A.M. Castle & Co. - LOS ANGELES - CASTLE METALS A. M. Castle & Co. 14001 ORANGE AVENUE PARAMOUNT, CA 90723		Date of Direct Shipment 17-FEB-16		Place PRO Number Here
Tax Registration Number: 36-0879160		Other References (Include Bill of Lading No.) 2887438-2		
Consignee (Name and Address) A.M. Castle & Co. - TORONTO - CASTLE METALS A. M. Castle & Co. (Canada) Inc. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		Purchaser (Name and Address) A.M. Castle & Co. - TORONTO - CASTLE METALS A. M. Castle & Co. (Canada) Inc. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		
Tax Registration Number: 13835 3438 RC0001		Tax Registration Number: 13835 3438 RC0001		
Transportation ABF		Conditions of Sale and Terms of Payment 1% 10, NET 30		
INCO Term: DDP - MISSISSAUGA, ON, L5N 2K7, CAN		Currency of Settlement USD		

Item	Specs of Commodities				Tariff Code		Export License		ECCN	ITAR
	Order-Line-Ship	# Pkgs.	Weight	Heat	Country of Origin	Units	UOM		Price per Unit	Total Price
16188	2.5000.RD.718.NICKEL.CG.SOL TR.120.0000-168.0000				7505120000		NLR		EAR99	N/A
	4246188-2-1	1	213.00 LBS	L5B61-3	US	213.00	LBS		\$12.2400	\$2,607.12
751247.MO	4.0000.PL.2024.T351.ALUMINUM.USI.48.5000.144.5000				7606123030		NLR		EAR99	N/A
	4242812-1-1	1	426.82 LBS	153320B7		426.82	LBS		\$2.9261	\$1,248.91
751247.MO	4.0000.PL.2024.T351.ALUMINUM.USI.48.5000.144.5000				7606123030		NLR		EAR99	N/A
	4242812-2-1	1	0.41 LBS	153320B7		0.41	LBS		\$2.9261	\$1.19
14670.MO	2.5000.PL.6061.T651.ALUMINUM.49.5000.144.5000				7606123030		NLR		EAR99	N/A
	4246992-1-1	1	98.73 LBS	156742B9	US	6.00	PCS		\$1.8839	\$185.99

Invoice Package Total	Total Weights		Invoice Total	Originator (Name and Address) A.M. Castle & Co. - Los Angeles
	Net	Gross		
4	738.96	806.96	\$4,043.21	14001 ORANGE AVENUE 050372560 PARAMOUNT, CA 90723UNITED STATES
* Price per UOM and Total Price have been adjusted to include Processing and Handling Charges if applicable.				Signature:

THESE COMMODITIES, TECHNOLOGY, OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED

**Castle Metals®**

A.M. Castle & Co.

North American Free Trade Agreement - CERTIFICATE OF ORIGIN

Exporter Name A.M. Castle & Co. A. M. Castle & Co. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 Tax Identification Number: 36-0879160	Reference Number 2887438-2
Producer Name Tax Identification Number: Available Upon Customs Request	Importer Name A.M. Castle & Co. A. M. Castle & Co. (Canada) Inc. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 Tax Identification Number: 13835 3438 RC0001

Description of Good(s)		Heat Number	HTC	Preference Criterion	Producer	Net Cost	Country of Origin
16188	2.5000.RD.718.NICKEL.CG.SOL TR.120.0000-168.0000	L5B61-3	750512	B	No2	No	US
14670.MO	2.5000.PL.6061.T651.ALUMINUM.48.5000.144.5000	156742B9	760612	B	No2	No	US
751247.MO	4.0000.PL.2024.T351.ALUMINUM.USI.48.5000.144.5000	153320B7	760612	B	No2	No	US

I certify that:

The information on this document is true and accurate and I assume responsibility for proving such presentations. I understand that I am liable for any false statements or material omissions made on or in connection with this document;

I agree to maintain and present upon request, documentation necessary to support this certificate, and to inform, in writing, all persons to whom the certificate was given of any changes that would affect the accuracy or validity of this certificate;

The goods originated in the territory of one or more of the parties, and comply with the origin requirements specified for those goods in the North American Free Trade Agreement, and unless specifically exempted in Article 411 or Annex 401, there has been no further production or any preparation outside the territories of the parties; and

This certificate consists of _____ pages, including all attachments.

Authorized Signature:	Company: A. M. Castle & Co.	
Name (Print or Type):	Title:	
Date:	Telephone:	Fax:

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6102-010
 DATE: 16/03/01

PO / BATCH NO.: 31324/141654

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 6
 QUANTITY INSPECTED: 6
 QUANTITY REJECTED: _____

THICKNESS ORDERED: 7.95X8.25X2.50
 THICKNESS RECEIVED: 7.95X8.25X2.550
 SHEET SIZE ORDERED: _____
 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N	
CORRECT FINISH	☒ Y N	
CORROSION	Y ☒ N	
CORRECT GRAIN DIRECTION	☒ Y N	
CORRECT MATERIAL	☒ Y N	
CORRECT THICKNESS	☒ Y N	
PHOTO REQUIRED	Y ☒ N	
CORRECT MATERIAL	☒ Y N	
CORRECT REF # TO LINK CERT	☒ Y N	
CORRECT MATERIAL IDENTIFICATION	☒ Y N	
CORRECT M# ON THE MATERIAL	☒ Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>14</u> 9-09 DATE: <u>16/03/01</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

- 1- VERIFY STOCK TO DART PURCHASE ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

- 1- VERIFY TO DART SUPPLIED DRAWING
 - 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
 - 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
 - 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING
- AFTER MATERIAL PASSES INSPECTION**
- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN 20pcs FOR FULL INSPECTION
 - 6- INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER